MATERIAL SAFETY DATA SHEET

SECTION I

DATE OF PREPARATION
June 2011

PRODUCT NAME: **ICO Ure Guard 60**
PRODUCT CLASS: Aliphatic polyurethane,
PRODUCT TYPE: 1, 6 Hexamethylene Diisocyanate Aliphatic Polyisocyanate Solution
D.O.T. CATEGORY: UN 1993 Flammable Liquid NOS (Xylene, Ethyl Benzene) 3 PG II

ADDRESS: **International Coatings**
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SECTION II - HAZARDOUS INGREDIENTS

FOR CLEAR AND COLOR

		Occupational Exposure Limits			Vapor Pressure		
Hazardous Components	CAS Number	OSHA PEL	ACGIH TLV	OSHA STEL	mm Hg	@ Temp	Wt. %
*Normal Butyl Acetate	123-86-4	150 PPM	150 PPM	200 PPM	10.0	66F	7
Saturated Polyester Polyol (Non Hazardous)	Unknown	None	None	None	N/A		
Propylene Glycol Monomethyl Ether Acetate	108-65-6	None	None	None	3.7	68F	
*Xylene	1330-20-7	100 PPM	100 PPM	150 PPM	5.1	68F	2
Cellulose Acetate Butyrate Ester	9004-36-8	None	None	None	N/A		
Methyl N Amyl Ketone	110-43-0	100 PPM	50 PPM	None	2.1	68F	
Dibutyltin Diluarate	77-58-7	.1 mg/m3	.1 mg/m3	.1 mg/m3	N/A		
Proprietary Non Hazardous Additives	Unknown	None	None	None	N/A		
2,6-Dimethyl-4-Heptanone	108-83-8	25 PPM	25 PPM	None	1.0	90F	
*Ethyl Benzene	100-41-4	100 PPM	100 PPM	125 PPM	1.0	14F	< 0.5%

FOR COLOR ONLY

Pigment	Various	Non Hazardous in Liquid Form			N/A		
Ethyl 3-Ethoxypropionate	763-69-9	None	None	None	1.1	77F	

- Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. Xylene Stel = 150 PPM (ACGIH) Methyl N-Amyl Ketone Stel (ACGIH) = 100 PPM

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 279° to 329°F
VAPOR DENSITY: N/A
SOLUBILITY IN WATER: Negligible
APPEARANCE AND ODOR: Low viscosity liquid with ketone odor.
SPECIFIC GRAVITY (H20=1): 1.0
EVAPORATION RATE: N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 100°F
FLAMMABLE LIMITS IN AIR BY VOLUME:
LOWER: N/A
UPPER: N/A
METHOD USED: Seta Flash
EXTINGUISHING MEDIA: Foam, Alcohol Foam, CO2, Dry Chemical, Water Fog
SPECIAL FIREFIGHTING PROCEDURES:
Do not enter confined fire area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus, cool all fire exposed containers with water, and minimize contact with material.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Closed containers may explode when exposed to extreme heat, solvent vapors may be heavier than air, under conditions of stagnant air, vapors may build up and travel along the ground to an ignition source which can result in flash back to the source of the vapors, toxic vapors could be evolved from the combustion of this material.

SECTION V - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Avoid excessive heat or open flames, this material should not be mixed with phosphorous containing material or oxidizers.
INCOMPATIBILITY (MATERIAL TO AVOID):
Can react vigorously with strong oxidizing agents and phosphorous containing materials.
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon Monoxide and Carbon Dioxide
HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Solvent vapors are irritating to the eyes, nose and throat and respiratory tract resulting in dryness of the throat and tightness in the chest, other symptoms include headache, nausea, narcosis, fatigue and loss of appetite.
SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
SKIN: May cause irritation or allergic skin response, may cause defatting, dryness, cracking, rash, redness or dermatitis.
EYES: May cause corneal damage if left untreated which is slow to heal but usually reversible.
SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Solvents can penetrate the skin causing effects similar to those for acute inhalation symptoms.
INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause irritation to the digestive tract including sore throat, abdominal pain, nausea, vomiting and diarrhea. Vomiting may cause aspiration of solvents resulting in chemical pneumonitis.
HEALTH HAZARDS (ACUTE AND CHRONIC): Chronic exposure to organic solvents has been associated with various neurotoxic effects including brain damage, nervous system damage or death. Prolonged vapor contact may cause conjunctivitis, chronic inhalation may also include loss of memory or loss of coordination. Corneal damage is possible but usually reversible. Repeated exposure to solvents can cause anemia, liver abnormalities, kidney damage or cardiac abnormalities.
CARCINOGENICITY: No listed ingredients of this product are regulated as carcinogens.
NTP: NO
IARC MONOGRAPHS: NO
OSHA REGULATED: NO
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Respiratory conditions or other allergic response.
EMERGENCY AND FIRST AID PROCEDURES:
EYES: Flush eyes with water for at least fifteen minutes and consult a physician.
SKIN: Wash affected area with soap and water and remove contaminated clothing promptly.
INHALATION: Remove victim to fresh air area and administer oxygen if necessary. Obtain medical attention.
INGESTION: Do not induce vomiting, never give anything by mouth to an unconscious person. Consult a physician.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition and ventilate the area. Wear appropriate protective equipment such as vapor cartridge or supplied air as necessary. Dike and absorb the material with absorbent such as clay and place in disposal containers.
WASTE DISPOSAL METHOD: Dispose of the material in a waste disposal site in accordance with local, state, and federal laws, empty containers should be handled with care due to product residue and possible vapor from organic solvents. Never use a gas or electric torch to cut the drums.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in cool dry place. Seal all partially used containers. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Mixed materials contain the hazards of all the components, therefore, read the MSDS's of all the components prior to using material. Properly label all containers.
OTHER PRECAUTIONS: Avoid all skin contact. Avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles cannot be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to the reuse thereof. Supply appropriate ventilation or engineering controls prior to using this product.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Use a NIOSH approved respirator as required to prevent over-exposure to vapor in accordance with 29 CFR 1910.134. Use a positive pressure respirator when airborne concentrations are not known, if exceeding TLV's or if working in a confined space. Always consider the hazards from all components in the mixed material state.
VENTILATION: Exhaust ventilation sufficient to keep the airborne concentrations of the solvents and other hazardous materials below the toxic level concentrations.
PROTECTIVE GLOVES: Impervious gloves - Neoprene or rubber
EYE PROTECTION: Splash goggles or glasses with side shields. If the environment warrants, a full face shield should be employed.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear body covering clothing and other coverings as necessary such as apron and appropriate footwear to avoid contact with material.
WORK/HYGIENIC PRACTICES: Observe good general hygienic practices.

SECTION IX - DISCLAIMER

DISCLAIMER: The information contained herein is based on the data available to us and is believed to be accurate. However, International Coatings, Inc., makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. International Coatings, Inc., assumes no responsibilities for injury from the use of this product.

SECTION X – TRANSPORTATION

DOT PROPER SHIPPING NAME:	Flammable Liquid NOS (Xylene, Ethyl Benzene)
DOT HAZARD CLASSIFICATION OR DIVISION:	3
IDENTIFICATION NUMBER:	UN 1993
PACKAGING GROUP:	II
LABELS REQUIRED:	Flammable

MATERIAL SAFETY DATA SHEET

SECTION I

DATE OF PREPARATION
June 2011

PRODUCT NAME: **ICO Ure Guard 60 Part B**
PRODUCT CLASS: Polyurethane Resin Hardener
PRODUCT TYPE: 1, 6 Hexamethylene Diisocyanate Aliphatic Polyisocyanate Solution
D.O.T. CATEGORY: UN 1993 Flammable Liquid NOS (Xylene, Ethyl Benzene) 3 PG II

ADDRESS: **International Coatings**
2925 Lucy Lane
Franklin Park, IL 60131
TELEPHONE: 847-451-0279
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SECTION II - HAZARDOUS INGREDIENTS

		Occupational Exposure Limits				Vapor	Pressure
Hazardous Components	CAS Number	OSHA PEL	ACGIH TLV	OSHA STEL	mm Hg	@ Temp	Wt. %
Homopolymer of HDI	28182-81-2	1 mg/m³	None	None	N/A		
• Xylene	1330-20-7	100 PPM	100 PPM	150 PPM	5.1	68°F	12
n-Butyl Acetate	123-86-4	150 PPM	150 PPM	200 PPM	10.0	66°F	
Hexamethylene Diisocyanate (HDI)	822-06-0	None	0.005 PPM	None	N/A		

- Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. Xylene ACGIH STEL = 150 PPM. For HDI: Oral LD50> 10,000 mg/kg (RATS), Inhalation LC50 ranges from 137 to 1150 mg/m3, Eye Irritation score 54.6/110 for a 24 hour exposure, Skin exposure - moderate irritant irritation score 3.4/8 (rabbit).

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 279°F
VAPOR DENSITY: N/A
SOLUBILITY IN WATER: Negligible
APPEARANCE AND ODOR: Pale yellow liquid with solvent odor
SPECIFIC GRAVITY (H_2O = 1): 1.1
EVAPORATION RATE: N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 91°F
METHOD USED: Seta Flash
FLAMMABLE LIMITS IN AIR BY VOLUME-
LOWER: N/A **UPPER:** N/A
EXTINGUISHING MEDIA: Foam, Alcohol Foam, CO_2, Dry Chemical
SPECIAL FIREFIGHTING PROCEDURES:
Do not enter confined area without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Presence of solvents in product may require grounding. Remove all sources of ignition.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
If fire occurs, solvents may produce excessive pressure. Sealed drums may rupture and ignite. Vapors are heavier than air and may travel along the ground and ignite by any source of ignition. During a fire, HDI vapors and other toxic gasses may be evolved. Containers may burst if contaminated with water. Vapor flashback to source is possible.

SECTION V - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Avoid excessive heat or open flames as well as all sources of ignition such as sparks, heaters, static discharges etc.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid water, amines, strong bases, alcohols, metal compounds, and surface active compounds.
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: May form toxic chemical, carbon dioxide carbon, monoxide, oxides of nitrogen, HCN and HDI.
HAZARDOUS POLYMERIZATION: Moisture or material that react with Isocyanates and temperatures above 400°F may cause Polymerization.

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Can cause nausea and respiratory irritation, dizziness, weakness, fatigue, headache and possible unconsciousness. Burning sensation to mucous membranes, shortness of breath and flu like symptoms may occur.
SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
SKIN: May cause irritation, defatting and dermatitis.
EYES: Can cause severe irritation, redness, tearing, or slurred vision as well as corneal opacity and conjunctivitis.
SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause reddening, swelling, rash, scaling or blistering. Overexposure may cause sensitization resulting in reaction to contact of small amount.
INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. Can cause corrosive action to mucous membranes and digestive tracts.
HEALTH HAZARDS (ACUTE AND CHRONIC): Can cause sensitization by exposure through contact or high concentrations of vapor. Over-exposure to this material can cause cardiac abnormalities. Overexposure can possibly cause anemia, liver abnormalities, kidney damage or eye damage. May cause asthma or other respiratory disorders, bronchitis, emphysema, hyperactivity and excema.
CARCINOGENICITY: N.T.P.: NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO
No listed ingredients of this product are regulated as carcinogens.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory conditions or other allergic response.
EMERGENCY AND FIRST AID PROCEDURES:
EYES: Flush eyes with water for at least fifteen minutes and consult a physician.
SKIN: For extreme exposure use a safety shower immediately. Wash affected area with soap and water and remove contaminated clothing promptly.
INHALATION: Remove victim to fresh air area and administer oxygen if necessary. Obtain medical assistance. Asthmatic type symptoms may occur immediately or be delayed for several hours. Treatment is symptomatic.
INGESTION: Do not induce vomiting, keep person warm and consult a physician immediately. Give 1-2 cups of milk or water to drink

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear respirator and protective clothing. Remove all sources of ignitions. Remove excess with spark proof equipment, and the remainder with an absorbent such as clay and place in disposal containers. Contained air respirator may be necessary.
WASTE DISPOSAL METHOD: Dispose of the material in a water disposal site in accordance with local, state, and federal laws.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in cool dry place. Seal all partially used containers. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Mixed materials contain the hazards of all the components, therefore, read the MSDS's of all the components prior to using material. Properly label all containers. Keep material away from all sources of ignition.
OTHER PRECAUTIONS:
Avoid all skin contact. Avoid breathing vapors generated from the material. Observe conditions of good general hygiene and safe working practices. Contaminated leather articles cannot be cleaned and must be discarded if contaminated with this product. Wash all contaminated clothing prior to the reuse thereof. Wear appropriate safety equipment and respirator at all times when ventilation is not sufficient to control vapors. Observe OSHA regulations for respirator use (29 CFR 1910.134). When spraying material avoid exposure to all mists generated by using air supplied respirator.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION Use a NIOSH approved respirator as required to prevent over-exposure to vapor in accordance with 29 CFR 1910.134. Engineering or administrative measures should be taken to reduce the risk and exposure. Use a positive pressure supplied air respirator when exceeding TLV's or if HDI Monomer concentrations exceed acceptable limits or when spraying material.

VENTILATION: Exhaust ventilation sufficient to keep airborne concentrations of HDI below their TLV and MGL maximum. Refer to Patty's Industrial Hygiene and Toxicology - Volume 1 (3rd edition) Chapter 17 and Volume III (1st Edition) Chapter 3 for details.

PROTECTIVE GLOVES: Impervious gloves - neoprene or rubber

EYE PROTECTION: Use splash goggles or glasses with side shields. Do not wear contact lenses when using this product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear body covering clothing and other coverings as necessary such as apron and appropriate footwear to avoid contact with material.

WORK/HYGIENIC PRACTICES: Observe good general hygienic practices.

SECTION IX - DISCLAIMER

DISCLAIMER:

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SECTION X – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	Flammable Liquid N.O.S. (Xylene, Butyl Acetate)
DOT HAZARD CLASSIFICATION OR DIVISION:	3
IDENTIFICATION NUMBER:	UN1933
PACKAGING GROUP:	II
LABELS REQUIRED:	Flammable